

Date: Wednesday, 10/06/2009 10:43:07 AM
User: Julie Dawson

Process Sheet

Customer	CU-DAR001 Dart Helicopters Services			Drawing Name	DRILLING DETAIL, 205 SKIDTUBE		
Job Number	48455			Part Number	D25801		
Estimate Number	11808			Drawing Number	D2580 REV D		
P.O. Number				Project Number	N/A		
This Issue	10/06/2009	S.O. No.	:	Drawing Revision	D		
Prsht Rev.	NC			Material			
First Issue	/ /	Type	SKIDTUBES	Due Date	15/06/2009	Qty:	6 Um: Each
Previous Run							
Written By							
Checked & Approved By	<u>JL009-06-10</u>						
Comment	Est B 01.11.08 Revised Step 9, 10, 12, and 13 SM Est C 09.05.26 re-format EC verified by: DD						

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :		
1.0	D25001190	Ext'n -'I' Beam Tube 4"		
Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s) Pick: Qty Part Number Description Batch 1 D2500-1-190 Extrusion <u>B46468</u> <u>⑥ 19-6-10</u>				
2.0 HAND FINISHING1 HAND FINISHING RESOURCE #1				
Comment: HAND FINISHING RESOURCE #1 1- Inspect mat'l D2500-1-190 for damage. 2- Chemical Conversion Coat as per QSI 005 4.1 <u>⑥ 19-6-10 ⑥</u>				
3.0	D2596	Web, 205 Skidtube		
Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s) 205 Web Pick: Qty Part Number Description Batch 1 D2596 I beam <u>⑥ 48467 BE 09-06-11</u>				
4.0	SKIDTUBES 1	SKIDTUBES RESOURCE 1		
Comment: LANDING GEAR RESOURCE 1 1-Drill pilot holes using drill jig DT 8149 (Do not use cutting fluid) 2-Open holes to 0.500" as per Dwg D2580 without cutting fluid <u>⑥ 19-6-11</u>				

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 10/06/2009 10:43:07 AM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: DRLLING DETAIL, 205 SKIDTUBE

Job Number: 48455

Part Number: D25801

Job Number:



Seq. #: Machine Or Operation:

Description :

3-Countersink holes as per Dwg D2580 without cutting fluid

MA-6-11

4-Deburr and blow out all chips from inside of tube

BE 09-06-11

5-Bond web in place per QSI 015.

Pick:

Qty	Part Number	Description	Batch
A/R	Sikaflex-291	M111557	
Sikaflex expire date: 10-01-2031			

5.0 QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



(6)

Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

BE 09-06-11

6.0 QC5

INSPECT WORK TO CURRENT STEP



(6)

Comment: INSPECT WORK TO CURRENT STEP

DP 9-6-12

7.0 PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: Skidtubes Cell

DP 9-6-12 (6)

8.0 QC21

FINAL INSPECTION/W/O RELEASE



09/06/12 JG

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



MF
09-06-12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN <i>#</i>	DRAWN BY <i>RH</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. D2580	REV. D SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

RELEASED
07.06.28 #

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AEELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241-291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:
SEE NOTES ON
PAGE 2 FOR D2580-041 AND
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

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S "ENGINEERING

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WITHOUT NOTICE

WORK ORDER

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

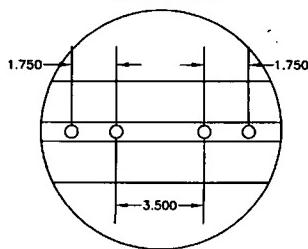
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

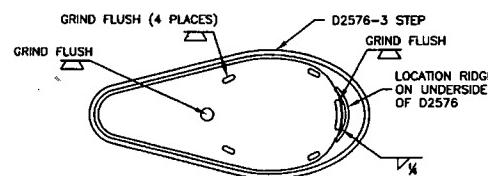
NOTE: Date & initial all entries

DETAIL A
SCALE 5:24

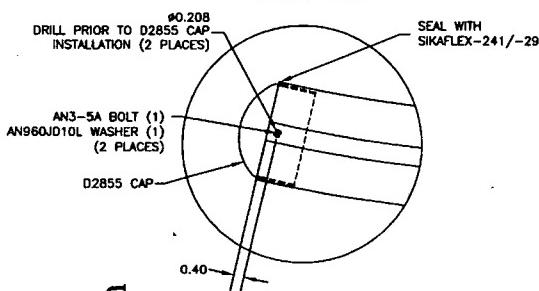


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07-06-28

DETAIL B
SCALE 5:24



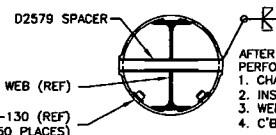
DETAIL C
SCALE 5:24



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SECTION D-D
SCALE 5:24



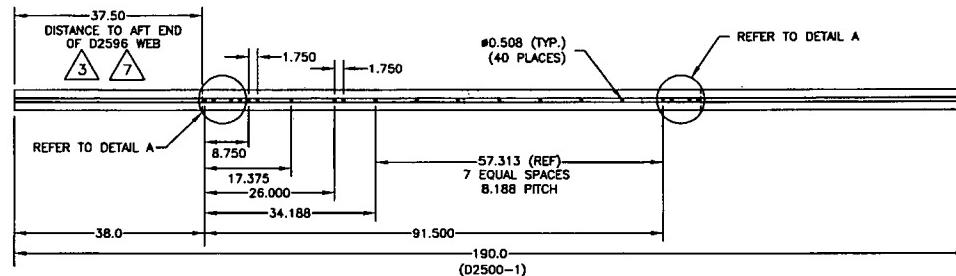
AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR #0.508 HOLES ONLY:
1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO #0.437 X 1.00 DEEP

AN3C4A BOLT (1)
AN960C1DL WASHER (1)
(50 PLACES)

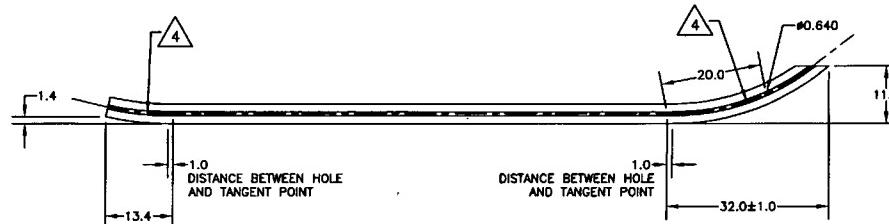
D2580-041 NOTES

- i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB
POWDER COAT ASSEMBLY GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

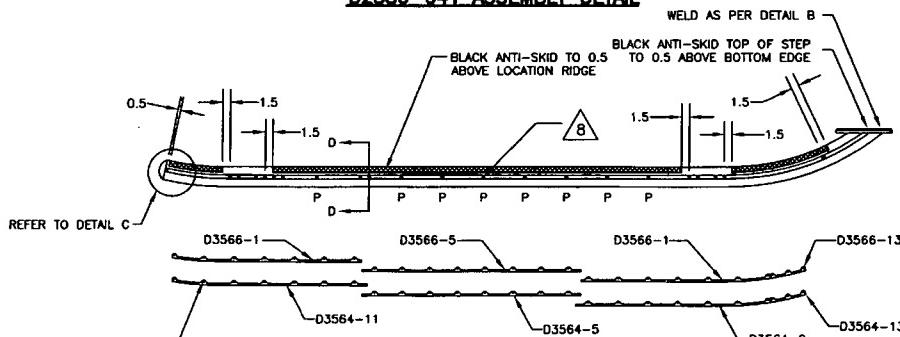
D2580-1 DRILLING DETAIL



D2580-1 BENDING AND CUTTING DETAIL



D2580-041 ASSEMBLY DETAIL



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#

P4

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#

P4

DART

DART AEROSPACE LTD.
HAWKESBURY, ONTARIO, CANADA

REV. D

SHEET 2 OF 3

DRAWING NO.

D2580

DATE

07.02.27

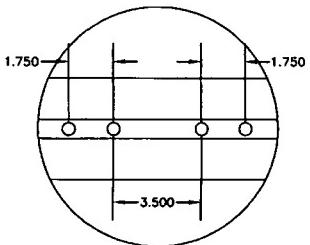
TITLE

205 SKIDTUBE ASSEMBLY

SCALE

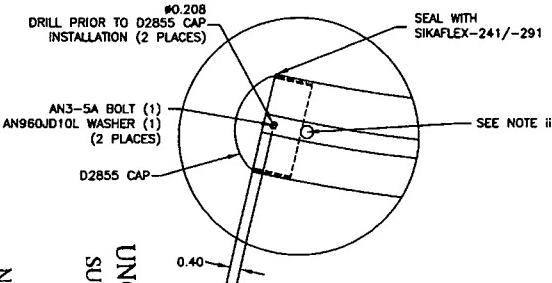
1:24

DETAIL
SCALE 5:24

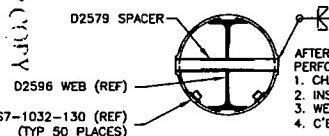


RELEASED
07-26-18 **C**

DETAIL G
SCALE 5:24



SECTION H-H



AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR #0.508 HOLES ONLY:

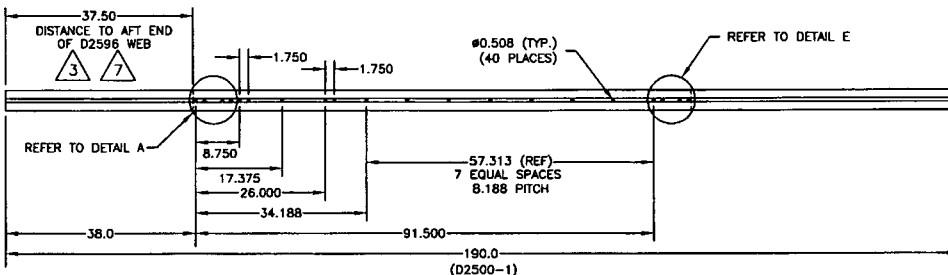
1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO #0.437 X 1.00 DEEP

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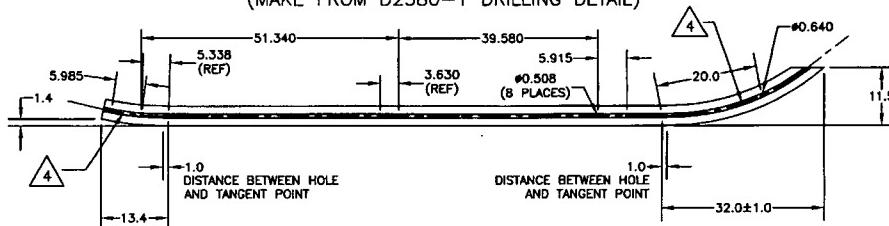
D2580-045 NOTES

- i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
 - ii) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

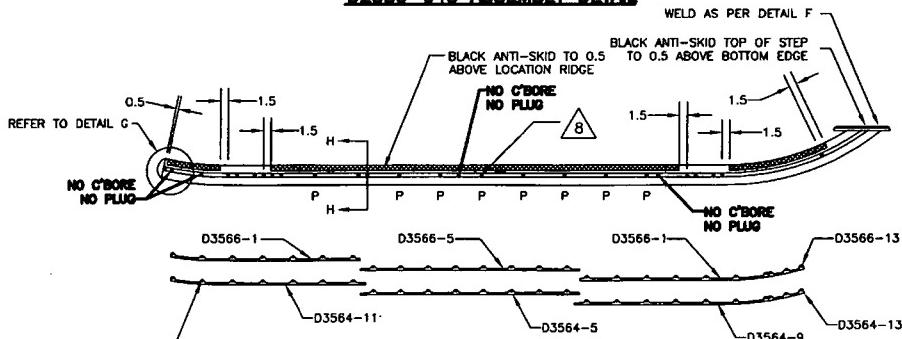
D2580-1 DRILLING DETAIL



D2580-5 BENDING AND CUTTING DETAIL
(MAKE FROM D2580-1 DRILLING DETAIL)



D2580-045 ASSEMBLY DETAIL



AN3C4A BOLT (1)
AN960C10L WASHER (1)
(50 PLACE)

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DESIGN <i>RH</i>	DRAWN BY <i>RH</i>	DART
CHECKED <i>H</i>	APPROVED <i>H</i>	DRAWING NO. D2580
DATE 07.02.27	TITLE 205 SKIDTUF	

DART AEROSPACE LTD.
WATKINSVILLE, GEORGIA, U.S.A.
WATKINSVILLE, ONTARIO, CANADA

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REV. D

SHEET 3 OF 3

SCN E

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